

Appl. No. 10/820,620
Response dated July 7, 2005
Reply to Office action dated June 8, 2005

Amendments to the Specification:

Please replace paragraph 1 on page 9 with the following amended paragraph:

FIG. 3 further shows portions of the patterned top layer of the IC interconnecting metallization made of copper or a copper alloy, embedded in insulator 310. Illustrated is specifically the portion 311 of the copper layer intended to provide a contact pad, and portion 312 intended to anchor the scribe street. The thickness of the copper layer is preferably in the range from 0.2 to 0.5 μm . The copper metallization is contained by barrier layer 313a, and [[113b]] 313b respectively, from diffusing into insulator 310 or other integrated circuit materials; barrier layers 313a and 313b are preferably made of tantalum nitride and about 10 to 30 nm thick. The bond pad copper layer 311 has preferably a width somewhat larger than 301 (typically in the range from 30 to 60 μm).

Please replace paragraph 3 on page 10 bridging page 11 with the following amended paragraph:

In order to protect the exposed thickness of the combined layers 350 and 330, a second overcoat layer 360 surrounds the plug area of window 301. The second overcoat layer 360 is positioned on the first overcoat layer 320 so that the edge 360a of the second overcoat layer overlays the edge 350b of the bondable layer 350 positioned on the portions 320a of the first overcoat layer surrounding the window. In FIG. 3, this overlay is designated 362. For many devices, overlay [[361]] 362 is between about 0.1 and 0.3 μm . Preferred materials for the second overcoat 360 are those, which are practically moisture impermeable or moisture retaining, and mechanically hard; examples include one or more layers of silicon nitride, silicon oxynitride, silicon carbide, or a stack of insulating materials including polyimide. The thickness 361 of second overcoat 360 is preferably at least about equal to the sum 351 of the thicknesses of the barrier and bondable layers, and often approximately the same as the thickness 320a of the first overcoat layer 320. For many devices, thickness 360a is in the range from 0.5 to 2.0 μm , preferably 1.2 μm .